

SEQUENCE LISTING

<110> Boone, Thomas C
Wild, Kenneth D
Sitney, Karen C
Min, Hosung
Kimmel, Bruce

<120> Peptides and Related Molecules That Modulate Nerve Growth Factor Activity

<130> A-827US

<140> Not Yet Assigned

<141> 2003-09-18

<150> 60/412,524

<151> 2002-09-19

<160> 286

<170> PatentIn version 3.1

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1 5 10 15

Gln Trp Ser Phe
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<210> 2

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ly occurring sequence

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Thr Asp Trp Leu Ser Asp Phe Pro Phe Tyr Glu Gln Tyr Phe Gly Leu
1 5 10 15

Met Pro Pro Gly
20

<210> 3

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ly occurring sequence

<400> 3

Phe Met Arg Phe Pro Asn Pro Trp Lys Leu Val Glu Pro Pro Gln Gly
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Trp Tyr Tyr Gly
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ly occurring sequence

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Glu	Phe	Pro	Phe
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ly occurring sequence

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Phe	Ser	Tyr	Ile	Trp	Ile	Asp	Glu	Thr	Pro	Ser	Asn	Ile	Asp	Arg	Tyr
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Met	Leu	Trp	Leu
			20

<210> 6

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ly occurring sequence

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Val	Asn	Phe	Pro	Lys	Val	Pro	Glu	Asp	Val	Glu	Pro	Trp	Pro	Trp	Ser
1				5					10					15	

Leu	Lys	Leu	Tyr
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<211> 20

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ly occurring sequence

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1				5					10					15	

Pro	Glu	Ala	Pro
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ly occurring sequence

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Trp	His	Phe	Gly	Thr	Pro	Tyr	Ile	Gln	Gln	Gln	Pro	Gly	Val	Tyr	Trp
1				5					10					15	

Leu	Gln	Ala	Pro
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Val	Trp	Asn	Tyr	Gly	Pro	Phe	Phe	Met	Asn	Phe	Pro	Asp	Ser	Thr	Tyr
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Phe	Leu	His	Glu
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<210> 10

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Trp	Arg	Ile	His	Ser	Lys	Pro	Leu	Asp	Tyr	Ser	His	Val	Trp	Phe	Phe
1				5					10					15	

Pro	Ala	Asp	Phe
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1				5					10					15	

Asn	Pro	Pro	Val
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<400> 12

Phe Tyr Ser Leu Glu Trp Leu Lys Asp His Ser Glu Phe Phe Gln Thr
1 5 10 15

Val Thr Glu Trp
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<210> 13

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Gln Phe Met Glu Leu Leu Lys Phe Phe Asn Ser Pro Gly Asp Ser Ser
1 5 10 15

His His Phe Leu
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<212> PRT

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Phe Thr Glu Asp
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<210> 15

<211> 20

<212> PRT

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ly occurring sequence

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Pro Val Pro Tyr
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<210> 16

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<400> 16

Trp Ser His Thr Glu Trp Val Pro Gln Val Trp Trp Lys Pro Pro Asn
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His Phe Tyr Val
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<210> 17

<211> 20

<212> PRT

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<400> 17

Trp Gly Glu Trp Ile Asn Asp Ala Gln Val His Met His Glu Gly Phe
1 5 10 15

Ile Ser Glu Ser
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<212> PRT

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Trp His Ile Ala
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<212> PRT

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<400> 19

Val Leu His Leu Gln Asp Pro Arg Gly Trp Ser Asn Phe Pro Pro Gly
1 5 10 15

Val Leu Glu Leu
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<210> 20

<211> 14

<212> PRT

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Ile His Gly Cys Trp Phe Thr Glu Glu Gly Cys Val Trp Gln
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<400> 21

Tyr Met Gln Cys Gln Phe Ala Arg Asp Gly Cys Pro Gln Trp
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<210> 22

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<400> 22

Lys Leu Gln Cys Gln Tyr Ser Glu Ser Gly Cys Pro Thr Ile
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<210> 23

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<400> 23

Phe Leu Gln Cys Glu Ile Ser Gly Gly Ala Cys Pro Ala Pro
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Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys Pro Asp Leu
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<210> 25

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<400> 25

Lys Leu Gln Cys Glu Phe Ser Thr Gln Gly Cys Pro Asp Leu
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<210> 27

<211> 14

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<400> 27

Ile Gln Gly Cys Trp Phe Thr Glu Glu Gly Cys Pro Trp Gln
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<210> 28

<211> 18

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Ser	Phe	Asp	Cys	Asp	Asn	Pro	Trp	Gly	His	Val	Leu	Gln	Ser	Cys	Phe
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Gly Phe

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Ser	Phe	Asp	Cys	Asp	Asn	Pro	Trp	Gly	His	Lys	Leu	Gln	Ser	Cys	Phe
1				5					10					15	

Gly Phe

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Met	Thr	Gly	Tyr	Thr	Glu	Tyr	Thr	Glu	Glu	Trp	Pro	Met	Gly	Phe	Gly
1				5					10					15	

Tyr Gln Trp Ser Phe
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<211> 21

<212> PRT

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<400> 31

Met	Thr	Asp	Trp	Leu	Ser	Asp	Phe	Pro	Phe	Tyr	Glu	Gln	Tyr	Phe	Gly
1				5					10					15	

Leu	Met	Pro	Pro	Gly
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<210> 32

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<400> 32

Met	Phe	Met	Arg	Phe	Pro	Asn	Pro	Trp	Lys	Leu	Val	Glu	Pro	Pro	Gln
1				5					10					15	

Gly	Trp	Tyr	Tyr	Gly
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<210> 33

<211> 21

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ly occurring sequence

<400> 33

Met Val Val Lys Ala Pro His Phe Glu Phe Leu Ala Pro Pro His Phe

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His Glu Phe Pro Phe
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<210> 34

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<400> 34

Met Phe Ser Tyr Ile Trp Ile Asp Glu Thr Pro Ser Asn Ile Asp Arg
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Tyr Met Leu Trp Leu
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1 5 10 15

Ser Leu Lys Leu Tyr
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<210> 36

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<400> 36

Met Thr Trp His Pro Lys Thr Tyr Glu Glu Phe Ala Leu Pro Phe Phe
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Val Pro Glu Ala Pro
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<210> 37

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<212> PRT

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<400> 37

Met Trp His Phe Gly Thr Pro Tyr Ile Gln Gln Gln Pro Gly Val Tyr
1 5 10 15

Trp Leu Gln Ala Pro
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<210> 38

<211> 21

<212> PRT

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<400> 38

Met Val Trp Asn Tyr Gly Pro Phe Phe Met Asn Phe Pro Asp Ser Thr
1 5 10 15

Tyr Phe Leu His Glu
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<210> 39

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ly occurring sequence

<400> 39

Met Trp Arg Ile His Ser Lys Pro Leu Asp Tyr Ser His Val Trp Phe
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Phe Pro Ala Asp Phe
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ly occurring sequence

<400> 40

Met Phe Trp Asp Gly Asn Gln Pro Pro Asp Ile Leu Val Asp Trp Pro
1 5 10 15

Trp Asn Pro Pro Val
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<211> 21

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<400> 41

Met	Phe	Tyr	Ser	Leu	Glu	Trp	Leu	Lys	Asp	His	Ser	Glu	Phe	Phe	Gln
1				5				10						15	

Thr	Val	Thr	Glu	Trp
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ly occurring sequence

<400> 42

Met	Gln	Phe	Met	Glu	Leu	Leu	Lys	Phe	Phe	Asn	Ser	Pro	Gly	Asp	Ser
1				5				10						15	

Ser	His	His	Phe	Leu
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ly occurring sequence

<400> 43

Met	Thr	Asn	Val	Asp	Trp	Ile	Ser	Asn	Asn	Trp	Glu	His	Met	Lys	Ser
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Phe	Phe	Thr	Glu	Asp
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<210> 44

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1				5				10						15	

Trp	Pro	Val	Pro	Tyr
			20	

<210> 45

<211> 21

<212> PRT

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ly occurring sequence

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Met	Trp	Ser	His	Thr	Glu	Trp	Val	Pro	Gln	Val	Trp	Trp	Lys	Pro	Pro
1				5				10						15	

Asn	His	Phe	Tyr	Val
			20	

<210> 46

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Met	Trp	Gly	Glu	Trp	Ile	Asn	Asp	Ala	Gln	Val	His	Met	His	Glu	Gly
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Phe	Ile	Ser	Glu	Ser
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<400> 47

Met	Val	Pro	Trp	Glu	His	Asp	His	Asp	Leu	Trp	Glu	Ile	Ile	Ser	Gln
1				5					10					15	

Asp	Trp	His	Ile	Ala
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<210> 48

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Met	Val	Leu	His	Leu	Gln	Asp	Pro	Arg	Gly	Trp	Ser	Asn	Phe	Pro	Pro
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Gly	Val	Leu	Glu	Leu
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<210> 49

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<210> 51

<211> 15

<212> PRT

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ly occurring sequence

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Met	Lys	Leu	Gln	Cys	Gln	Tyr	Ser	Glu	Ser	Gly	Cys	Pro	Thr	Ile
1				5					10					15

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<211> 15

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ly occurring sequence

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<210> 53

<211> 15

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ly occurring sequence

<400> 53

Met	Lys	Leu	Gln	Cys	Glu	Phe	Ser	Thr	Ser	Gly	Cys	Pro	Asp	Leu
1				5					10					15

<210> 54

<211> 15

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ly occurring sequence

<400> 54

Met	Lys	Leu	Gln	Cys	Glu	Phe	Ser	Thr	Gln	Gly	Cys	Pro	Asp	Leu
1				5					10					15

<210> 55

<211> 15

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ly occurring sequence

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Met	Lys	Leu	Gln	Cys	Glu	Phe	Ser	Thr	Ser	Gly	Cys	Pro	Trp	Leu
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<210> 56

<211> 15

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ly occurring sequence

<400> 56

Met	Ile	Gln	Gly	Cys	Trp	Phe	Thr	Glu	Glu	Gly	Cys	Pro	Trp	Gln
1				5					10					15

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ly occurring sequence

<400> 57

Met	Ser	Phe	Asp	Cys	Asp	Asn	Pro	Trp	Gly	His	Val	Leu	Gln	Ser	Cys
1				5					10					15	

Phe Gly Phe

<210> 58

<211> 19

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Phe Gly Phe

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<213> Homo sapiens

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<210> 60

<211> 228

<212> PRT

<213> Homo sapiens

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Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
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Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
 35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
 50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
 65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
 85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
 100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
 115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
 130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
 145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
 165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
 180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
 195 200 205

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 210 215 220

Ser Pro Gly Lys
 225

<210> 61

<211> 779

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<212> DNA

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<223> Expression vector component

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gtggacttga ggacccccct ggcagtcaaa aggagaaggg gggttttggg ttcctgtggg      180
agtactagag ggcctgggga ctccagtgtg cgcaccacca cctgcactcg gtgcttcttg      240
gactccagtt caagttgacc atgcacctgc cgcacctcca cgtattacgg ttctgtttcg      300
gcgccctcct cgtcatgttg tcgtgcatgg cacaccagtc gcaggagtgg caggacgtgg      360
tcctgaccga cttaccgttc ctcatgttca cgttccagag gttgtttcgg gagggtcggg      420
ggtagctctt ttggtagagg tttcggtttc ccgtcggggc tcttggtgtc cacatgtggg      480
acgggggtag ggcctactc gactggttct tggtcagtc ggactggacg gaccagtttc      540
cgaagatagg gtcgctgtag cggcacctca ccctctcgtt acccgtcggc ctcttgttga      600
tgttctggtg cggagggcac gacctgaggc tgccgaggaa gaaggagatg tcgttcgagt      660
ggcacctgtt ctctgccacc gtcgtcccct tgcagaagag tacgaggcac tacgtactcc      720
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<210> 63

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

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<400> 63
atgattcatg gttgttggtt tacagaagaa gttgtgttt ggcaactcga ggggtgga      57

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<210> 64

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

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<400> 64
atgtatatgc aatgtcaatt tgctcgtgat gttgtccac aatggctcga ggggtgga      57

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<210> 65

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 65

atgaaattac aatgtcaata ttctgaatct ggttggtccaa caattctcga ggggtgga 57

<210> 66

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 66

atgttttttac aatgtgaaat ttctgggtggt gcttggtccag ctccactcga ggggtgga 57

<210> 67

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 67

atgaaattac aatgtgaatt ttctacttct ggttggtccag atttactcga ggggtgga 57

<210> 68

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 68
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<210> 69

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 69
atgaaattac aatgtgaatt ttctacttct ggttggtcctt gggttactcga ggggtgga 57

<210> 70

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 70
atgattcaag gttggttggtt tactgaagaa ggttggtcctt ggcaactcga ggggtgga 57

<210> 71

<211> 69

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 71
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gaggggtgga 69

<210> 72

<211> 69

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 72
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gaggggtgga 69

<210> 73

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 73
atgacagggt atacagaata tacagaagaa tggccaatgg gttttgggta tcaatgggtcc 60
tttctcgagg gtgga 75

<210> 74

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 74
atgacagatt gggtatctga ttttccattc tatgaacaat actttgggtt aatgccacct 60
gggtctcgagg gtgga 75

<210> 75

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 75
atgtttatgc gttttcctaa cccatggaaa ttagttgaac cacctcaagg ttggtactat 60
gggtctcgagg gtgga 75

<210> 76

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 76
atgggttgta aagctccaca ttttgaattc ttagctccac ctcatTTTca tgaatttcca 60
tttctcgagg gtgga 75

<210> 77

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 77
atgttttctt atatttgat tgatgaaact ccgtctaaca ttgatcgta tatgctgtgg 60
ctgctcgagg gtgga 75

<210> 78

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 78
tggttaactt tccgaaagtt ccggaagatg ttgaaccgtg gccgtggtct ctgaaactgt 60
atctcgaggg tggga 74

<210> 79

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 79
atgacttggc acccgaaaac ttatgaagaa ttgctctgc cgttttttgt tccggaagct 60
ccgctcgagg gtgga 75

<210> 80

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 80
atgtggcatt ttggtactcc atatattcaa caacaaccag gtgtttattg gttacaagct 60
ccactcgagg gtgga 75

<210> 81

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 81
atggtttgga attatgggtcc attttttatg aattttccag attctactta ttttttacat 60
gaactcgagg gtgga 75

<210> 82

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 82
atgtggcgta ttcattctaa accattagat tattctcatg ttgggttttt tccagctgat 60
tttctcgagg gtgga 75

<210> 83

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 83
atgttttggg atggtaatca accaccagat attttagttg attggccatg gaatccacca 60
gttctcgagg gtgga 75

<210> 84

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 84
atgttttatt ctttagaatg gttaaaagat cattctgaat tttttcaaac tggtactgaa 60
tggctcgagg gtgga 75

<210> 85

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 85
atgcaattta tggaattact gaaattcttt aattctccag gtgattcttc tcatcacttc 60
ttactcgagg gtgga 75

<210> 86

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 86
atgactaatg ttgattggat ttctaataat tgggaacata tgaaatcttt ttttactgaa 60
gatctcgagg gtgga 75

<210> 87

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 87
atgccaaatg aaaaaccata tcaaattgcaa tcttggtttc caccagattg gccagttcca 60
tatctcgagg gtgga 75

<210> 88

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 88
atgtggtctc atactgaatg ggttccacaa gtttggtgga aaccaccaa tcatttttat 60
gttctcgagg gtgga 75

<210> 89

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 89
atgtggggtg aatggattaa tgatgctcaa gttcacatgc atgaagggtt tatttctgaa 60
tctctcgagg gtgga 75

<210> 90

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 90
atggttccat gggaacatga tcatgattta tgggaaatta tttctcaaga ttggcatatt 60
gctctcgagg gtgga 75

<210> 91

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Encodes for therapeutically active peptides with methionine residue at N-terminus

<400> 91
atgggttttac atttacaaga tccacgtggt tgggtctaatt ttccaccagg tggttttagaa 60
ttactcgagg gtgga 75

<210> 92

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 92

Met	Ile	His	Gly	Cys	Trp	Phe	Thr	Glu	Glu	Gly	Cys	Val	Trp	Gln	Leu
1				5					10					15	

Glu Gly Gly

<210> 93

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 93

Met	Tyr	Met	Gln	Cys	Gln	Phe	Ala	Arg	Asp	Gly	Cys	Pro	Gln	Trp	Leu
1				5					10					15	

Glu Gly Gly

<210> 94

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 94

Met	Lys	Leu	Gln	Cys	Gln	Tyr	Ser	Glu	Ser	Gly	Cys	Pro	Thr	Ile	Leu
1				5					10					15	

Glu Gly Gly

<210> 95

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 95

Met	Phe	Leu	Gln	Cys	Glu	Ile	Ser	Gly	Gly	Ala	Cys	Pro	Ala	Pro	Leu
1				5					10					15	

Glu Gly Gly

<210> 96

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 96

Met	Lys	Leu	Gln	Cys	Glu	Phe	Ser	Thr	Ser	Gly	Cys	Pro	Asp	Leu	Leu
1				5					10					15	

Glu Gly Gly

<210> 97

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural

ly occurring sequence

<400> 97

Met Lys Leu Gln Cys Glu Phe Ser Thr Gln Gly Cys Pro Asp Leu Leu
1 5 10 15

Glu Gly Gly

<210> 98

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 98

Met Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys Pro Trp Leu Leu
1 5 10 15

Glu Gly Gly

<210> 99

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 99

Met Ile Gln Gly Cys Trp Phe Thr Glu Glu Gly Cys Pro Trp Gln Leu
1 5 10 15

Glu Gly Gly

<210> 100

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 100

Met	Ser	Phe	Asp	Cys	Asp	Asn	Pro	Trp	Gly	His	Val	Leu	Gln	Ser	Cys
1				5					10					15	

Phe	Gly	Phe	Leu	Glu	Gly	Gly
			20			

<210> 101

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 101

Met	Ser	Phe	Asp	Cys	Asp	Asn	Pro	Trp	Gly	His	Lys	Leu	Gln	Ser	Cys
1				5					10					15	

Phe	Gly	Phe	Leu	Glu	Gly	Gly
			20			

<210> 102

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 102

Met Thr Gly Tyr Thr Glu Tyr Thr Glu Glu Trp Pro Met Gly Phe Gly
1 5 10 15

Tyr Gln Trp Ser Phe Leu Glu Gly Gly
20 25

<210> 103

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 103

Met Thr Asp Trp Leu Ser Asp Phe Pro Phe Tyr Glu Gln Tyr Phe Gly
1 5 10 15

Leu Met Pro Pro Gly Leu Glu Gly Gly Gly
20 25

<210> 104

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 104

Met Phe Met Arg Phe Pro Asn Pro Trp Lys Leu Val Glu Pro Pro Gln
1 5 10 15

Gly Trp Tyr Tyr Gly Leu Glu Gly Gly
20 25

<210> 105

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 105

Met Val Val Lys Ala Pro His Phe Glu Phe Leu Ala Pro Pro His Phe
1 5 10 15

His Glu Phe Pro Phe Leu Glu Gly Gly
20 25

<210> 106

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 106

Met Phe Ser Tyr Ile Trp Ile Asp Glu Thr Pro Ser Asn Ile Asp Arg
1 5 10 15

Tyr Met Leu Trp Leu Leu Glu Gly Gly
20 25

<210> 107

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 107

Met Val Asn Phe Pro Lys Val Pro Glu Asp Val Glu Pro Trp Pro Trp

1 5 10 15

Ser Leu Lys Leu Tyr Leu Glu Gly Gly Gly
20 25

<210> 108

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 108

Met Thr Trp His Pro Lys Thr Tyr Glu Glu Phe Ala Leu Pro Phe Phe
1 5 10 15

Val Pro Glu Ala Pro Leu Glu Gly Gly
20 25

<210> 109

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 109

Met Trp His Phe Gly Thr Pro Tyr Ile Gln Gln Gln Pro Gly Val Tyr
1 5 10 15

Trp Leu Gln Ala Pro Leu Glu Gly Gly
20 25

<210> 110

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 110

Met Val Trp Asn Tyr Gly Pro Phe Phe Met Asn Phe Pro Asp Ser Thr
1 5 10 15

Tyr Phe Leu His Glu Leu Glu Gly Gly
20 25

<210> 111

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 111

Met Trp Arg Ile His Ser Lys Pro Leu Asp Tyr Ser His Val Trp Phe
1 5 10 15

Phe Pro Ala Asp Phe Leu Glu Gly Gly
20 25

<210> 112

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 112

Met Phe Trp Asp Gly Asn Gln Pro Pro Asp Ile Leu Val Asp Trp Pro
1 5 10 15

Trp Asn Pro Pro Val Leu Glu Gly Gly
20 25

<210> 113

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 113

Met Phe Tyr Ser Leu Glu Trp Leu Lys Asp His Ser Glu Phe Phe Gln
1 5 10 15

Thr Val Thr Glu Trp Leu Glu Gly Gly
20 25

<210> 114

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 114

Met Gln Phe Met Glu Leu Leu Lys Phe Phe Asn Ser Pro Gly Asp Ser
1 5 10 15

Ser His His Phe Leu Leu Glu Gly Gly
20 25

<210> 115

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 115

His	Met	Thr	Asn	Val	Asp	Trp	Ile	Ser	Asn	Asn	Trp	Glu	His	Met	Lys
1				5					10					15	

Ser	Phe	Phe	Thr	Glu	Asp	Leu	Glu	Gly	Gly
			20					25	

<210> 116

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 116

Met	Pro	Asn	Glu	Lys	Pro	Tyr	Gln	Met	Gln	Ser	Trp	Phe	Pro	Pro	Asp
1				5					10					15	

Trp	Pro	Val	Pro	Tyr	Leu	Glu	Gly	Gly
			20					25

<210> 117

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 117

Met	Trp	Ser	His	Thr	Glu	Trp	Val	Pro	Gln	Val	Trp	Trp	Lys	Pro	Pro
1				5					10					15	

Asn	His	Phe	Tyr	Val	Leu	Glu	Gly	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----

20

25

<210> 118

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 118

Met	Trp	Gly	Glu	Trp	Ile	Asn	Asp	Ala	Gln	Val	His	Met	His	Glu	Gly
1				5					10					15	

Phe	Ile	Ser	Glu	Ser	Leu	Glu	Gly	Gly
			20					25

<210> 119

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
ly occurring sequence

<400> 119

Met	Val	Pro	Trp	Glu	His	Asp	His	Asp	Leu	Trp	Glu	Ile	Ile	Ser	Gln
1				5					10					15	

Asp	Trp	His	Ile	Ala	Leu	Glu	Gly	Gly
			20					25

<210> 120

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 120

Met	Val	Leu	His	Leu	Gln	Asp	Pro	Arg	Gly	Trp	Ser	Asn	Phe	Pro	Pro
1				5					10					15	

Gly	Val	Leu	Glu	Leu	Leu	Glu	Gly	Gly
			20				25	

<210> 121

<211> 777

<212> DNA

<213> Artificial Sequence

<220>

<223> Expression vector

<400> 121

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ccaaggacac	cctcatgata	tcccggaccc	ctgaggtcac	atgcgtgggtg	gtggacgtga	180
gccacgaaga	ccctgagggtc	aagttcaact	ggtagctgga	cggcgtggag	gtgcataatg	240
ccaagacaaa	gccgcggggag	gagcagtaca	acagcacgta	ccgtgtgggtc	agcgtcctca	300
ccgtcctgca	ccaggactgg	ctgaatggca	aggagtacaa	gtgcaagggtc	tccaacaaag	360
ccctcccagc	ccccatcgag	aaaaccatct	caaagccaa	agggcagccc	cgagaaccac	420
aggtgtacac	cctgccccca	tcccgggatg	agctgaccaa	gaaccagggtc	agcctgacct	480
gcctgggtcaa	aggcttctat	cccagcgaca	tgcctgtgga	gtgggagagc	aatgggcagc	540
cggagaacaa	ctacaagacc	acgcctcccg	tgctggactc	cgacggctcc	ttcttctctt	600
acagcaagct	caccgtggac	aagagcaggt	ggcagcaggg	gaacgtcttc	tcatgctccg	660
tgatgcatga	ggctctgcac	aaccactaca	cgcagaagag	cctctccctg	tctccgggta	720
aaggtggagg	tggtgggtgca	cagaaagcgg	ccgcaaaaaa	actcgagtaa	tggatcc	777

<210> 122

<211> 777

<212> DNA

<213> Artificial Sequence

<220>

<223> Expression vector

<400> 122
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 ggttcctgtg ggagtactag agggcctggg gactccagtg tacgcaccac cacctgcact 180
 cggtgcttct gggactccag ttcaagttga ccatgcacct gccgcacctc cacgtattac 240
 ggttctgttt cggcgccctc ctctcatgt tctctgtcat ggcacaccag tcgcaggagt 300
 ggcaggacgt ggtcctgacc gacttaccgt tcctcatgtt cacgttccag aggttgtttc 360
 gggagggtcg ggggtagctc ttttggtaga ggtttcggtt tcccgtcggg gctcttggtg 420
 tccacatgtg ggacgggggt agggccctac tcgactggtt cttggtccag tcggactgga 480
 cggaccagtt tccgaagata gggtcgctgt agcggcacct caccctctcg ttaccctcgcg 540
 gcctcttggt gatgttctgg tgcggagggc acgacctgag gctgccgagg aagaaggaga 600
 tgtcgttcga gtggcacctg ttctcgtcca ccgtcgtccc cttgcagaag agtacgaggc 660
 actacgtact ccgagacgtg ttggtgatgt gcgtcttctc ggagagggac agaggcccat 720
 ttccacctcc accaccagt gtctttcgcc ggcgtttttt tgagctcatt acctagg 777

<210> 123

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker for peptide-FC linkage

<400> 123

Gly Gly Gly Lys Gly Gly Gly Gly
 1 5

<210> 124

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker for peptide-FC linkage

<400> 124

Gly Gly Gly Asn Gly Ser Gly Gly
1 5

<210> 125

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker for peptide-FC linkage

<400> 125

Gly Gly Gly Cys Gly Gly Gly Gly
1 5

<210> 126

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker for peptide-FC linkage

<400> 126

Gly Pro Asn Gly Gly
1 5

<210> 127

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer for PCR

<400> 127

cggcgcaact atcggtatca agctg

25

<210> 128

<211> 26

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<213> Artificial Sequence

<220>

<223> Oligonucleotide primer for PCR

<400> 128

catgtaccgt aacactgagt ttcgtc

26

<210> 129

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 129

tatgattcat ggttggtggt ttacagaaga aggttggtggt tggcaac

47

<210> 130

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 130

tcgagttgcc aaacacaacc ttcttctgta aaccaacaac catgaatca

49

<210> 131

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 131

tatgtatatg caatgtcaat ttgctcgtga tggttgtcca caatggc

47

<210> 132

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 132

tcgagccatt gtggacaacc atcacgagca aattgacatt gcatataca

49

<210> 133

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 133

tatgaaatta caatgtcaat attctgaatc tggttgtcca acaattc

47

<210> 134

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 134
tcgagaattg ttggacaacc agattcagaa tattgacatt gtaatttca 49

<210> 135

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 135
tatgttttta caatgtgaaa tttctggtgg tgcttgtcca gctccac 47

<210> 136

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 136
tcgagtgagg ctggacaagc accaccagaa atttcacatt gtaaaaaca 49

<210> 137

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 137
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<210> 138

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 138

tcgagtaaat ctggacaacc agaagtagaa aattcacatt gtaatttca

49

<210> 139

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 139

tatgaaatta caatgtgaat tttctactca aggttggtcca gatttac

47

<210> 140

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 140

tcgagtaaat ctggacaacc ttgagtagaa aattcacatt gtaatttca

49

<210> 141

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 141

tatgaaatta caatgtgaat tttctacttc tgggtgtcct tgggttac

47

<210> 142

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

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<400> 142

tcgagtaacc aaggacaacc agaagtagaa aattcacatt gtaatttca 49

<210> 143

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 143

tatgattcaa gggtgttggt ttactgaaga aggttgtcct tggcaac 47

<210> 144

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

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<400> 144

tcgagttgcc aaggacaacc ttcttcagta aaccaacaac cttgaatca 49

<210> 145

<211> 59

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 145
tatgtctttt gattgtgata atccttgggg tcatgtttta caatcttggt ttggttttc 59

<210> 146

<211> 61

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 146
tcgagaaaac caaaacaaga ttgtaaaaca tgacccaag gattatcaca atcaaaagac 60
a 61

<210> 147

<211> 59

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 147
tatgtctttt gattgtgata atccttgggg tcataaatta caatcttggt ttggttttc 59

<210> 148

<211> 61

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 148
tcgagaaaac caaaacaaga ttgtaattta tgacccaag gattatcaca atcaaaagac 60

a 61

<210> 149

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 149
tatgacaggt tatacagaat atacagaaga atggccaatg ggttttggtt atcaatggtc 60
ctttc 65

<210> 150

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 150
tcgagaaagg accattgata accaaaacc attggccatt cttctgtata ttctgtataa 60
cctgtca 67

<210> 151

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 151
tatgacagat tggttatctg attttccatt ctatgaacaa tacttttggtt taatgccacc 60
tggtc 65

<210> 152

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 152

tcgagaccag gtggcattaa accaaagtat tgttcataga atggaaaatc agataaccaa 60

tctgtca 67

<210> 153

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 153

tatgtttatg cgttttccta acccatggaa attagttgaa ccacctcaag gttggtacta 60

tggtc 65

<210> 154

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 154

tcgagaccat agtaccaacc ttgaggtggt tcaactaatt tccatggggt aggaaaacgc 60

ataaaca 67

<210> 155

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 155
tatgggttggt aaagctccac attttgaatt cttagctcca cctcattttc atgaatttcc 60
atttc 65

<210> 156

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 156
tcgagaaatg gaaattcatg aaaatgaggt ggagctaaga attcaaaatg tggagcttta 60
acaacca 67

<210> 157

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 157
tatgttttct tatatttgga ttgatgaaac tccgtctaac attgatcggt atatgctgtg 60
gctgc 65

<210> 158

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 158

tcgagcagcc acagcatata acgatcaatg ttagacggag tttcatcaat ccaaataataa 60
gaaaaca 67

<210> 159

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 159

tatgggtaac ttccgaaag ttccggaaga tggtgaaccg tggccgtggt ctctgaaact 60
gtatc 65

<210> 160

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 160

tcgagataca gtttcagaga ccacggccac ggttcaacat cttccggaac tttcggaag 60
ttaacca 67

<210> 161

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 161
tatgacttgg cacccgaaaa cttatgaaga atttgctctg ccgttttttg ttccggaagc 60
tccgc 65

<210> 162

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 162
tcgagcggag cttccggaac aaaaaacggc agagcaaatt cttcataagt ttccgggtgc 60
caagtca 67

<210> 163

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 163
tatgtggcat tttggtactc catatattca acaacaacca ggtgtttatt ggttacaagc 60
tccac 65

<210> 164

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 164
tcgagtgagg cttgtaacca ataaacacct gggtgttggt gaatatatgg agtaccaaaa 60

tgccaca

67

<210> 165

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 165

tatggtttgg aattatggtc cattttttat gaattttcca gattctactt attttttaca

60

tgaac

65

<210> 166

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 166

tcgagttcat gtaaaaaata agtagaatct ggaaaattca taaaaaatgg accataattc

60

caaacca

67

<210> 167

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 167

tatgtggcgt attcattcta aaccattaga ttattctcat gtttggtttt ttccagctga

60

ttttc

65

<210> 168

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 168

tcgagaaaat cagctggaaa aaaccaaaca tgagaataat ctaatgggtt agaatgaata 60

cgccaca 67

<210> 169

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 169

tatgttttgg gatggtaatc aaccaccaga tatttttagtt gattggccat ggaatccacc 60

agttc 65

<210> 170

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 170

tcgagaactg gtggattcca tggccaatca actaaaatat ctggtggttg attaccatcc 60

caaaaca 67

<210> 171

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 171
tatgttttat tctttagaat ggttaaaaga tcattctgaa ttttttcaaa ctgttactga 60
atggc 65

<210> 172

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 172
tcgagccatt cagtaacagt ttgaaaaaat tcagaatgat cttttaacca ttctaaagaa 60
taaaaca 67

<210> 173

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 173
tatgcaattt atggaattac tgaaattctt taattctcca ggtgattctt ctcatcactt 60
cttac 65

<210> 174

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 174

tcgagtaaga agtgatgaga agaatacacct ggagaattaa agaatttcag taattccata 60
aattgca 67

<210> 175

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 175

tatgactaat gttgattgga tttctaataa ttgggaacat atgaaatctt tttttactga 60
agatc 65

<210> 176

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 176

tcgagatctt cagtaaaaaa agatttcata tggtcccaat tattagaaat ccaatcaaca 60
ttagtca 67

<210> 177

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 177

tatgccaat gaaaaacat atcaaagca atcttggtt ccaccagatt ggccagttcc 60

atatc 65

<210> 178

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 178

tcgagatatg gaactggcca atctgggtgga aaccaagatt gcatttgata tggtttttca 60

tttgga 67

<210> 179

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 179

tatgtggtct cataactgaat gggttccaca agtttggtgg aaaccaccaa atcattttta 60

tggtc 65

<210> 180

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 180

tcgagaacat aaaaatgatt tgggtggttc caccaaactt gtggaacca ttcagtatga 60

gaccaca

67

<210> 181

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 181

tatggttcca tgggaacatg atcatgattt atgggaaatt atttctcaag attggcatat

60

tgctc

65

<210> 182

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 182

tcgagagcaa tatgccaatc ttgagaaata atttcccata aatcatgatc atgttcccat

60

ggaacca

67

<210> 183

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 183

tatggtttta catttacaag atccacgtgg ttggtctaatt tttccaccag gtgtttttaga

60

attac

65

<210> 184

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 184

tcgagtaatt ctaaaacacc tgggtggaaaa ttagaccaac cacgtggatc ttgtaaattgt 60

aaaacca 67

<210> 185

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 185

tatgtgggggt gaatggatta atgatgctca agttcacatg catgaagggtt ttattttctga 60

atctc 65

<210> 186

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used in peptide construction

<400> 186

tcgagagatt cagaaataaa accttcatgc atgtgaactt gagcatcatt aatccattca 60

ccccaca 67

<210> 187

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer for PCR

<400> 187
acaaacaaac atatgggtgc acagaaagcg gccgcaaaaa aactcgaggg tggaggcggt 60
ggggaca 67

<210> 188

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer for PCR

<400> 188
ggtcattact ggaccggatc 20

<210> 189

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer used in PCR

<400> 189
cgtacagggtt tacgcaagaa aatgg 25

<210> 190

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer used in PCR

<400> 190
tttggttgat ccattactcg agtttttttg cggccgcttt ctgtgcacca ccacctccac 60
ctttac 66

<210> 191

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer used in PCR

<400> 191
caaacgaatg gaccttcatt aaagccaga 29

<210> 192

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer used in PCR

<400> 192
ggtggtgcgg ccgcactcga gactgttgaa agttgttttag ca 42

<210> 193

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer used in PCR

<400> 193
aacacaaaag tgcacagggt ggagggtggtg gtgcggccgc act 43

<210> 194

<211> 76

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide for library preparation

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<221> misc_feature

<222> (1)..(2)

<223> N in positions 1-2 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (4)..(5)

<223> N in positions 4-5 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (7)..(8)

<223> N in positions 7-8 can be any nucleotide A, G, C or T

<220>

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<222> (10)..(11)

<223> N in positions 10-11 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (13)..(14)

<223> N in positions 13-14 can be any nucleotide A, G, C or T

<220>

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<222> (16)..(17)

<223> N in positions 16-17 can be any nucleotide A, G, C or T

<220>

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<222> (19)..(20)

<223> N in positions 19-20 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (28)..(29)

<223> N in positions 28-29 can be any nucleotide A, G, C or T

<220>

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<222> (40)..(41)

<223> N in positions 40-41 can be any nucleotide A, G, C or T

<220>

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<222> (43)..(44)

<223> N in positions 43-44 can be any nucleotide A, G, C or T

<220>

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<222> (46)..(47)

<223> N in positions 46-47 can be any nucleotide A, G, C or T

<220>

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<222> (49)..(50)

<223> N in positions 49-50 can be any nucleotide A, G, C or T

<220>

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<222> (52)..(53)

<223> N in positions 52-53 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (55)..(56)

<223> N in positions 55-56 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (58)..(59)

<223> N in positions 58-59 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<223> K in positions 3, 6, 9, 12, 15, 18, 21, 30, 42, 45, 48, 51, 54, 57, and 60 represents an equal representation of nucleotides G and T

<400> 194

nnknnknnkn nknnknnknn kctgcagnnk sartwtagn nknnknnknn knnknnknnk 60

cattctctcg agatca 76

<210> 195

<211> 91

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide for library preparation

<220>

<221> misc_feature

<222> (16)..(17)

<223> N in positions 16-17 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (19)..(20)

<223> N in positions 19-20 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (22)..(23)

<223> N in positions 22-23 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (34)..(35)

<223> N in positions 34-35 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (55)..(56)

<223> N in positions 55-56 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (67)..(68)

<223> N in positions 67-68 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (70)..(71)

<223> N in positions 70-71 can be any nucleotide A, G, C or T

<220>

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<222> (73)..(74)

<223> N in positions 73-74 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<223> K in positions 18, 21, 24, 36, 57 69, 72 and 75 represents an equal representation of nucleotides G and T

<400> 195

cacagtgcac agggtnnknn knnkaaactg cagnnkgaat ttagcaccag cggcnnkccg 60

gatctgnkn nknnkcattc tctcgagatc a 91

<210> 196

<211> 91

<212> DNA

<213> Artificial Sequence

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<223> Oligonucleotide for library preparation

<220>

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<222> (16)..(17)

<223> N in positions 16-17 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (19)..(20)

<223> N in positions 19-20 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (22)..(23)

<223> N in positions 22-23 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (25)..(26)

<223> N in positions 25-26 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (28)..(29)

<223> N in positions 28-29 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (31)..(32)

<223> N in positions 31-32 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (34)..(35)

<223> N in positions 34-35 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (55)..(56)

<223> N in positions 55-56 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (58)..(59)

<223> N in positions 58-59 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (61)..(62)

<223> N in positions 61-62 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (64)..(65)

<223> N in positions 64-65 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (67)..(68)

<223> N in positions 67-68 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (70)..(71)

<223> N in positions 70-71 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (73)..(74)

<223> N in positions 73-74 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<223> K in positions 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72 and 75 represents an equal representatio

n of nucleotides G and T

<400> 196
 cacagtgcac agggtnnnknn knnknnknnk nnknnktgkt tkackgakga kggknnknnk 60
 nnknnknnkn nknnkcattc tctcgagatc a 91

<210> 197

<211> 97

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide for library preparation

<220>

<221> misc_feature

<222> (16)..(17)

<223> N in positions 16-17 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (79)..(80)

<223> N in positions 79-80 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<223> K in positions 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78 and 81 represents an equal representation of nucleotides G and T

<400> 197
 cacagtgcac agggtnnktk ktgkgakggk aakcakckc ckgakatkt kgtkgaktgk 60
 ccktgkaakc ckckgtnn kcattctctc gagatca 97

<210> 198

<211> 97

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide for library preparation

<220>

<221> misc_feature

<222> (16)..(17)

<223> N in positions 16-17 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (79)..(80)

<223> N in positions 79-80 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<223> K in positions 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78 and 81 represents an equal representation of nucleotides G and T

<400> 198

cacagtgcac agggtnnkac kgaktgkctk agkgakttkc ckttktakga kcaktakttk 60

ggkctkatkc ckckggknn kcattctctc gagatca 97

<210> 199

<211> 91

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide for library preparation

<220>

<221> misc_feature

<222> (16)..(17)

<223> N in positions 16-17 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (19)..(20)

<223> N in positions 19-20 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (22)..(23)

<223> N in positions 22-23 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (34)..(35)

<223> N in positions 34-35 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (55)..(56)

<223> N in positions 55-56 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (67)..(68)

<223> N in positions 67-68 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (70)..(71)

<223> N in positions 70-71 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<222> (73)..(74)

<223> N in positions 73-74 can be any nucleotide A, G, C or T

<220>

<221> misc_feature

<223> K in positions 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72 and 75 represents an equal representation of nucleotides G and T

<400> 199

cacagtgcac agggtnnknn knnkaakctk caknnkgakt tktckacktc kggknnkceck 60

gakctknnkn nknnkcattc tctcgagatc a 91

<210> 200

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer for PCR

<400> 200

cacagtgcac aggggt 15

<210> 201

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer for PCR

<400> 201

tgatctcgag agaattg 16

<210> 202

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 202

Ala	Gln	Pro	Thr	Asp	Gln	Leu	Gly	Asp	Trp	Met	Leu	Asn	Tyr	Phe	Arg
1				5					10					15	

Leu	Val	Pro	Pro	Gly	Thr
			20		

<210> 203

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 203

Met	Tyr	Leu	Asp	Glu	Trp	Gln	Trp	Pro	Pro	Asp	Val	Phe	Val	Glu	Trp
1				5					10					15	

Pro	Trp	Lys	Val	Ser	Val	Asp
			20			

<210> 204

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 204

Met Tyr Gln Lys Leu Gln Cys Glu Leu Ser Thr Ser Gly Cys Pro Asp
1 5 10 15

Leu Trp Arg Ala Leu Glu
20

<210> 205

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 205

Ala Gln Leu Gln Ala Leu Leu Arg Glu Leu Pro Leu Tyr Glu Gln Phe
1 5 10 15

Phe Arg Leu Met Pro Pro Gly Tyr Leu Glu
20 25

<210> 206

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 206

Ala Gln Val Thr Asn Ile Leu Ser Gln Leu Pro Leu Trp Gln Gln Trp
1 5 10 15

Leu Gly Leu Met Pro Pro Gly Val Leu Glu
20 25

<210> 207

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 207

Met Ala Met Ala Gln Leu Gln Cys Glu Phe Ser Val Gln Gly Cys Pro
1 5 10 15

Ser Phe Val Leu Glu
20

<210> 208

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 208

Met Leu His Asn Thr Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys Pro
1 5 10 15

Asp Leu Pro Leu Gln Leu Glu
20

<210> 209

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 209

Met Trp Gly Gln Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys Pro
1 5 10 15

Asp Leu Pro Lys Ala Leu Glu
20

<210> 210

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 210

Met Ile Asp Trp Leu Ser Gln Asn Arg Leu Phe Glu Gln Tyr Phe Glu
1 5 10 15

Leu Ile Pro Pro Gly
20

<210> 211

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 211

Gln Pro Thr Asp Gln Leu Gly Asp Trp Met Leu Asn Tyr Phe Arg Leu
1 5 10 15

Val Pro Pro Gly Thr Leu Glu
20

<210> 212

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 212

Ala Gln Leu Ala Asp Leu Leu Ala Gln Leu Pro Met Trp Glu Gln Tyr
1 5 10 15

Leu Gly Leu Thr Pro Pro Ser Ser Leu Glu
20 25

<210> 213

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 213

Ala Gln Leu Arg Glu Leu Leu Ser Asp Leu Pro Met Trp Glu Gln Tyr
1 5 10 15

Phe Arg Leu Met Pro Pro Gly Tyr Leu Glu
20 25

<210> 214

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 214

Met Val Gln Arg Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys Pro

1 5 10 15

Asp Leu Thr Leu Leu Leu Glu
 20

<210> 215

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 215

Met Gly Pro Leu Val Leu Gln Cys Glu Phe Ser Gln Gly Gly Cys Pro
1 5 10 15

Thr Phe Leu Leu Glu
 20

<210> 216

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 216

Ala Glu Gln Ser Gln Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys
1 5 10 15

Pro Asp Leu Pro Gln Met Leu Glu
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<210> 217

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 217

Met His Met Ser Asp Val Tyr Trp Pro Pro Asp Val Phe Val Glu Trp
1 5 10 15

Pro Trp Val Pro Gln Val Pro Leu Glu
20 25

<210> 218

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 218

Met Trp Val Gly Lys Gly Arg Leu Gln Cys Glu Ile Val Gly Gln Cys
1 5 10 15

Pro Gln Asn Pro Arg Trp Leu Leu Glu
20 25

<210> 219

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 219

Ala Gln Pro Thr Asp Gln Leu Gly Asp Trp Met Leu Asn Tyr Phe Arg
1 5 10 15

Leu Val Pro Pro Gly Thr Leu Glu
20

<210> 220

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 220

Met Pro Glu Trp Lys Gly Tyr Trp Pro Pro Glu Val Phe Ile Glu Trp
1 5 10 15

Pro Trp Ser Pro Pro Val Gln Leu Glu
20 25

<210> 221

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 221

Pro Thr Asp Gln Leu Gly Asp Trp Met Leu Asn Tyr Phe Arg Leu Val
1 5 10 15

Pro Pro Gly Thr
20

<210> 222

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 222

Met	Ile	Pro	Gly	Lys	Leu	Gln	Cys	Glu	Leu	Ser	Ser	Ser	Gly	Cys	Pro
1				5					10					15	

Asn	Leu	Gln	Ala	Met	Leu	Glu
			20			

<210> 223

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 223

Met	Asn	Arg	Met	Gln	Leu	Gln	Cys	Glu	Phe	Ser	Gln	Ala	Gly	Cys	Pro
1				5					10					15	

Val	Trp	Ala	Leu	Glu
			20	

<210> 224

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 224

Ala	Gln	Gln	Ser	Gln	Lys	Leu	Gln	Cys	Glu	Phe	Ser	Thr	Ser	Gly	Cys
1				5					10					15	

Pro	Asp	Leu	Pro	Leu	Gln	Leu	Glu
-----	-----	-----	-----	-----	-----	-----	-----

20

<210> 225

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 225

Ala	Gln	Gln	Thr	Glu	Trp	Leu	Trp	Ser	Leu	Pro	Leu	Val	Glu	Gln	Tyr
1				5				10					15		

Phe	Ser	Leu	Val	Pro	Pro	Gly	Tyr	Leu	Glu
			20					25	

<210> 226

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 226

Ala	Gln	Thr	Gln	Glu	Trp	Met	Met	Asn	Leu	Pro	Leu	Val	Glu	Gln	Tyr
1			5					10					15		

Phe	Gly	Leu	Thr	Pro	Pro	Gly	Met	Leu	Glu
			20					25	

<210> 227

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 227

Pro Thr Asp Gln Leu Gly Asp Trp Met Leu Asn Tyr Phe Arg Leu Val
1 5 10 15

Pro Pro Gly

<210> 228

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 228

Met Asp Glu Trp Gln Trp Pro Pro Asp Val Phe Val Glu Trp Pro Trp
1 5 10 15

Lys Val Ser Val Asp
20

<210> 229

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 229

Met Ser Trp Gln Glu Gly Met Trp Pro Pro Glu Val Phe Val Glu Trp
1 5 10 15

Pro Trp Thr Ala His Asp Trp Leu Glu
20 25

<210> 230

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 230

Ala Gln Gln Gly Met Trp Pro Gly Ala Met Ser Leu Leu Glu Gln Tyr
1 5 10 15

Phe Ala Leu Thr Pro Pro Gly Leu Leu Glu
20 25

<210> 231

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 231

Asp Gln Leu Gly Asp Trp Met Leu Asn Tyr Phe Arg Leu Val Pro Pro
1 5 10 15

Gly Thr

<210> 232

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural

lly occurring sequence

<400> 232

Met Ile Asp Trp Leu Ser Gln Asn Arg Leu Phe Glu Gln Tyr Phe Glu
1 5 10 15

Leu Ile Pro Pro Gly Val
20

<210> 233

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
lly occurring sequence

<400> 233

Met Ser Gly Asp Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys Pro
1 5 10 15

Asp Leu Pro Ile Ser Leu Glu
20

<210> 234

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
lly occurring sequence

<400> 234

Met Gln Gln Gly Lys Leu Gln Cys Glu Leu Ser Thr Ala Gly Cys Pro
1 5 10 15

Glu Leu Leu Leu Pro Leu Glu
20

<210> 235

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 235

Ala Gln Gln Ser Gln Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys
1 5 10 15

Pro Asp Leu Pro Leu Met Leu Glu
20

<210> 236

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 236

Ala Gln Asn Pro Gly His Leu Leu Asp Leu Pro Leu Phe Tyr Gln Tyr
1 5 10 15

Phe Gln Leu Met Pro Pro Gly Ile Leu Glu
20 25

<210> 237

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 237

Pro Thr Asp Gln Leu Gly Asp Trp Met Leu Asn Tyr Phe Arg Leu Val
1 5 10 15

Pro Pro Gly Thr Leu Glu
20

<210> 238

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 238

Gln Thr Asp Trp Arg Trp Asp Leu Pro Phe Val Glu Asp Tyr Phe Arg
1 5 10 15

Leu Arg Pro Pro Gly Val
20

<210> 239

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 239

Ala Gln Met Ile Asp Trp Leu Ser Gln Asn Arg Leu Phe Glu Gln Tyr
1 5 10 15

Phe Glu Leu Ile Pro Pro Gly Val Leu Glu
20 25

<210> 240

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 240

Met Gln Leu Trp Asp Gly Lys Trp Pro Pro Glu Val Phe Val Glu Trp
1 5 10 15

Pro Trp Asn Pro Pro Val Gln
20

<210> 241

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 241

Ala Gln Gln Ser Gln Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys
1 5 10 15

Pro Asp Leu Pro Gln Gln Leu Glu
20

<210> 242

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 242

Met Val Glu Trp Gln Trp Cys Trp Phe Thr Glu Glu Gly Cys Pro Leu

1 5 10 15

Pro Leu Arg Leu Glu
 20

<210> 243

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 243

Met Trp Leu Phe Glu Gly Gln His Pro Pro Glu Val Leu Val Glu Trp
1 5 10 15

Pro Trp Val Trp Pro Val Ala Leu Glu
 20 25

<210> 244

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 244

Met Arg Tyr Phe Glu Gly Asn Trp Pro Leu Asp Val Phe Val Asp Trp
1 5 10 15

Pro Trp Asn Pro Thr Val Asp Leu Glu
 20 25

<210> 245

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 245

Met Gln Val Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys Pro Glu
1 5 10 15

Met His Arg Ile Leu Glu
20

<210> 246

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 246

Met Gln Leu Gly Lys Leu Gln Cys Glu Leu Ser Thr Ala Gly Cys Pro
1 5 10 15

Asp Leu Pro Tyr Val Leu Glu
20

<210> 247

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 247

Met Tyr Leu Asp Glu Trp Gln Trp Pro Pro Asp Val Phe Val Glu Trp
1 5 10 15

Pro Trp Lys Val Ser
20

<210> 248

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 248

Met Thr Val Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys Pro Asp
1 5 10 15

Leu Ala Trp Gln Leu Glu
20

<210> 249

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 249

Met Phe Arg Tyr Gln Leu Gln Cys Glu Leu Ser Ser Ser Gly Cys Pro
1 5 10 15

Asp Leu Asn Asn Ile Leu Glu
20

<210> 250

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 250

Ala Gln Ala Arg Glu Trp Gln Thr Glu Leu Pro Phe Phe Glu Gln Tyr
1 5 10 15

Phe Ala Leu Met Pro Pro Gly Val Leu Glu
20 25

<210> 251

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 251

Gln Thr Asp Trp Leu Ser Asp Leu Pro Leu Leu Glu Gln Tyr Phe Arg
1 5 10 15

Leu Met Pro Pro Gly Val
20

<210> 252

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 252

Met Ser Gln Ala Pro Leu Gln Cys Glu Tyr Ser Ser Ser Gly Cys Pro
1 5 10 15

Leu Trp Gln Leu Glu

20

<210> 253

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 253

Ala	Gln	Leu	Thr	Asp	Gln	Leu	Arg	Leu	Leu	Pro	Leu	Tyr	Leu	Gln	Tyr
1				5					10					15	

Phe	Ser	Leu	Ile	Pro	Pro	Val	Thr	Leu	Glu
			20					25	

<210> 254

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 254

Met	Gln	Ser	Trp	Asp	Val	Lys	Trp	Pro	Pro	Asp	Val	Phe	Val	Glu	Trp
1				5					10					15	

Pro	Tyr	Asn	Pro	Pro	Ile	Gln	Leu	Glu
			20					25

<210> 255

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 255

Met	Ile	Lys	Gln	Lys	Leu	Gln	Cys	Glu	Phe	Ser	Thr	Ser	Gly	Cys	Pro
1				5					10					15	

Asp	Leu	Trp	Met	Ser	Leu	Glu
			20			

<210> 256

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 256

Met	His	Glu	Gln	Lys	Leu	Gln	Cys	Glu	Leu	Ser	Thr	Ser	Gly	Cys	Pro
1				5					10					15	

Asp	Leu	Val	Gln	Met	Leu	Glu
			20			

<210> 257

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 257

Met	Gln	Phe	Lys	Leu	Gln	Cys	Glu	Phe	Ser	Thr	Ser	Gly	Cys	Pro	Asp
1				5					10					15	

Leu	Arg	His	Pro	Leu	Glu
			20		

<210> 258

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 258

Ala Gln Met Gln Glu Leu Leu Arg Glu Leu Pro Leu Tyr Glu Gln Tyr
1 5 10 15

Met Ala Leu Met Pro Pro Gly Met Leu Glu
20 25

<210> 259

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 259

Ala Gln Gln Gln Gln Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys
1 5 10 15

Pro Asp Leu Pro Leu Met Leu Glu
20

<210> 260

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural

lly occurring sequence

<400> 260

Ala Gln Gln Thr Asn Trp Cys Met Gly Ile Pro Tyr Cys Glu Gln Tyr
1 5 10 15

Phe Gly Leu Ser Pro His Gly Ile Leu Glu
20 25

<210> 261

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
lly occurring sequence

<400> 261

Met Ala Ser Leu Thr Leu Gln Cys Glu Tyr Ser Gly Gln Gly Cys Pro
1 5 10 15

Lys Trp Pro Leu Glu
20

<210> 262

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-natural
lly occurring sequence

<400> 262

Ala Gln Leu Ala Glu Trp Leu Gln Gln Ile Pro Leu Tyr Glu Gln Tyr
1 5 10 15

Phe Gly Leu Met Pro Pro Asp Leu Leu Glu
20 25

<210> 263

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 263

Met	Glu	Leu	Ser	Ala	Arg	Asn	Trp	Pro	Pro	Glu	Ile	Phe	Glu	Asp	Trp
1				5					10					15	

Pro	Trp	Gln	Leu	Pro	Val	Asp	Leu	Glu
		20						25

<210> 264

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 264

Met	Trp	Met	Thr	Lys	Leu	Gln	Cys	Glu	Phe	Ser	Ser	His	Gly	Cys	Pro
1				5					10					15	

Gln	Leu	Thr	Ser	Met	Leu	Glu
			20			

<210> 265

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 265

Ala Glu Val Glu Trp Gln Trp Cys Trp Phe Thr Glu Glu Gly Cys Pro
1 5 10 15

Leu Pro Leu Arg Leu Glu
20

<210> 266

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 266

Met Tyr Leu Asp Glu Trp Gln Trp Pro Pro Asp Val Phe Val Glu Trp
1 5 10 15

Pro Trp Lys Val Ser Val Asp Leu Glu
20 25

<210> 267

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 267

Met Gln Ser Asn Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys Pro
1 5 10 15

Glu Leu Leu Asp Leu Leu Glu
20

<210> 268

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 268

Met Asn Val Gly Lys Leu Gln Cys Glu Leu Ser Thr Trp Gly Cys Pro
1 5 10 15

Val Pro Val Gln Gly Leu Glu
20

<210> 269

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 269

Met Tyr Leu Trp Glu Gly Ile Trp Pro Ala Glu Val Phe Arg Glu Trp
1 5 10 15

Pro Trp Lys Pro Pro Asn Arg Leu Glu
20 25

<210> 270

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 270

Met Leu Phe Trp Gln Gly Asn Pro Pro Pro Asp Val Phe Val Glu Trp

1 5 10 15

Pro Trp Gln Leu Pro Ala Ser Leu Glu
 20 25

<210> 271

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 271

Ala Gln Asn Gly Asp Trp Met Arg Gly Leu Pro Phe Leu Glu Gln Tyr
1 5 10 15

Phe Gln Leu Leu Pro Pro Gly Val Leu Glu
 20 25

<210> 272

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 272

Ala Gln Pro Thr Asp Gln Leu Gly Asp Trp Met Leu Asn Tyr Phe Arg
1 5 10 15

Leu Val Pro Pro Gly Thr Leu
 20

<210> 273

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Therapeutically active peptide of randomly generated, non-naturally occurring sequence

<400> 273

Trp	Asp	Met	Cys	His	Phe	Ser	His	Ala	Ala	Lys	Leu	Gln	Ser	Cys	Phe
1				5				10						15	

Pro His

<210> 274

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Consensus sequences from therapeutically active peptide of randomly generated, non-naturally occurring sequence

<220>

<221> misc_feature

<222> (1)..(1)

<223> X in position 1 is equal to any amino acid.

<220>

<221> misc_feature

<222> (10)..(12)

<223> X in positions 10, 11 and 12 is equal to any amino acid.

<220>

<221> misc_feature

<222> (4)..(4)

<223> X at position 4 is equal to F or W.

<220>

<221> misc_feature

<222> (5)..(5)

<223> X at position 5 is equal to S or T.

<400> 274

Xaa	Cys	Trp	Xaa	Xaa	Glu	Glu	Gly	Cys	Xaa	Xaa	Xaa
1				5					10		

<210> 275

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Consensus sequences from therapeutically active peptide of randomly generated, non-naturally occurring sequence

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> X in position 4 is equal to any amino acids.

<220>

<221> MISC_FEATURE

<222> (5)..(5)

<223> X at position 5 is equal to F or Y.

<220>

<221> MISC_FEATURE

<222> (7)..(8)

<223> X in positions 7 and 8 is equal to any amino acid.

1 5 10 15

Xaa Xaa

<210> 277

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Peptide of randomly generated, non-naturally occurring sequence

<400> 277

Ile His Gly Cys Trp Phe Thr Glu Glu Gly Cys Val Trp Gln
1 5 10

<210> 278

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Peptide of randomly generated, non-naturally occurring sequence

<400> 278

Leu Gln Met Cys Trp Phe Thr Glu Lys Gly Cys Glu Val Pro
1 5 10

<210> 279

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Peptide of randomly generated, non-naturally occurring sequence

<400> 279

Ala Gln Gln Gln Gln Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys

1 5 10 15

Pro Asp Leu Pro Leu Met Leu Glu
 20

<210> 280

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Peptide of randomly generated, non-naturally occurring sequence

<400> 280

Ala Gln Gln Ser Gln Lys Leu Gln Cys Glu Phe Ser Thr Ser Gly Cys
1 5 10 15

Pro Asp Leu Pro Gln Met Leu Glu
 20

<210> 281

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR forward primer to amplify phage clones

<400> 281

gtagctcac tcattaggca c

21

<210> 282

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR reverse primer to amplify phage clones

<400> 282

gtaccgtaac actgagtttc g 21

<210> 283

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer used to sequence amplified inserts of phage clones

<400> 283

gtaccgtaac actgagtttc g 21

<210> 284

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker for peptide-FC linkage

<400> 284

Gly Gly Gly Gly

1

<210> 285

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker for peptide-FC linkage

<400> 285

Gly Gly Gly Gly Gly

1

5

<210> 286

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker for peptide-FC linkage

<400> 286

Gly Gly Gly Gly Gly Gly Gly
1 5